

Cisco Catalyst C9500-12Q-A

Advanced High-Density 40G Core Switch Datasheet

NETWORK ADVANTAGE

Product Overview

The Cisco Catalyst C9500-12Q-A is an advanced enterprise-class 1RU high-performance core switch equipped with 12 dedicated 40G QSFP+ ports and the full **Network Advantage** license. Driven by Cisco's UADP 2.0 ASIC, it delivers high-density 40G connectivity alongside full Layer 3 routing protocols (BGP, OSPF, ISIS), MPLS, BGP EVPN VXLAN, and Software-Defined Access (SD-Access) capabilities.

GENERAL SPECIFICATIONS

Parameter	Specification Details
Model Code	C9500-12Q-A
Form Factor	1 Rack Unit (1RU) Rack-mountable
Port Density	12 x 40 Gigabit Ethernet QSFP+ Ports
Breakout Support	Supports 40G to 4x10G breakout cables for flexible port scaling
Power Supply	Dual redundant, hot-swappable AC/DC (Default: 950W AC)
Fan Tray	Hot-swappable variable speed fans (Front-to-Back Airflow)
License Included	Cisco Network Advantage (Full L3 & Advanced Automation)

PERFORMANCE & SCALABILITY

Metric	Capacity / Value
Switching Capacity	Up to 960 Gbps
Forwarding Rate	Up to 720 Mpps (Million Packets Per Second)
Total MAC Addresses	64,000
IPv4 / IPv6 Routes	Up to 212,000 IPv4 / 106,000 IPv6 (Advanced Scale)
Multicast Routes	32,000
DRAM / Flash Memory	16 GB DRAM / 16 GB Flash
VLAN IDs	4,094

NETWORK ADVANTAGE EXCLUSIVE FEATURES

- Full Layer 3 Enterprise Routing:** Advanced BGP, OSPF, IS-IS, EIGRP, VRF-Lite, and Policy-Based Routing (PBR).
- MPLS & Network Virtualization:** Complete MPLS L2/L3 VPN capability for multi-tenant overlay environments.

- **BGP EVPN VXLAN:** Software-Defined Access (SD-Access) overlay fabric for modern automated enterprise campuses.
- **Advanced Security & Telemetry:** Encrypted Traffic Analytics (ETA), Flexible NetFlow (FNF), MACsec-256, and model-driven telemetry.
- **High Availability:** Cisco StackWise Virtual support to combine two switches into a unified control plane.

PHYSICAL & ENVIRONMENTAL SPECIFICATIONS

Property	Value
Dimensions (H x W x D)	1.73 x 17.5 x 21.52 inches (4.4 x 44.5 x 54.7 cm)
Weight	11.8 kg (26.0 lbs)
Operating Temperature	0°C to 45°C (32°F to 113°F)
Operating Humidity	10% to 95% (non-condensing)
Input Voltage	100 to 240 VAC (50/60 Hz)